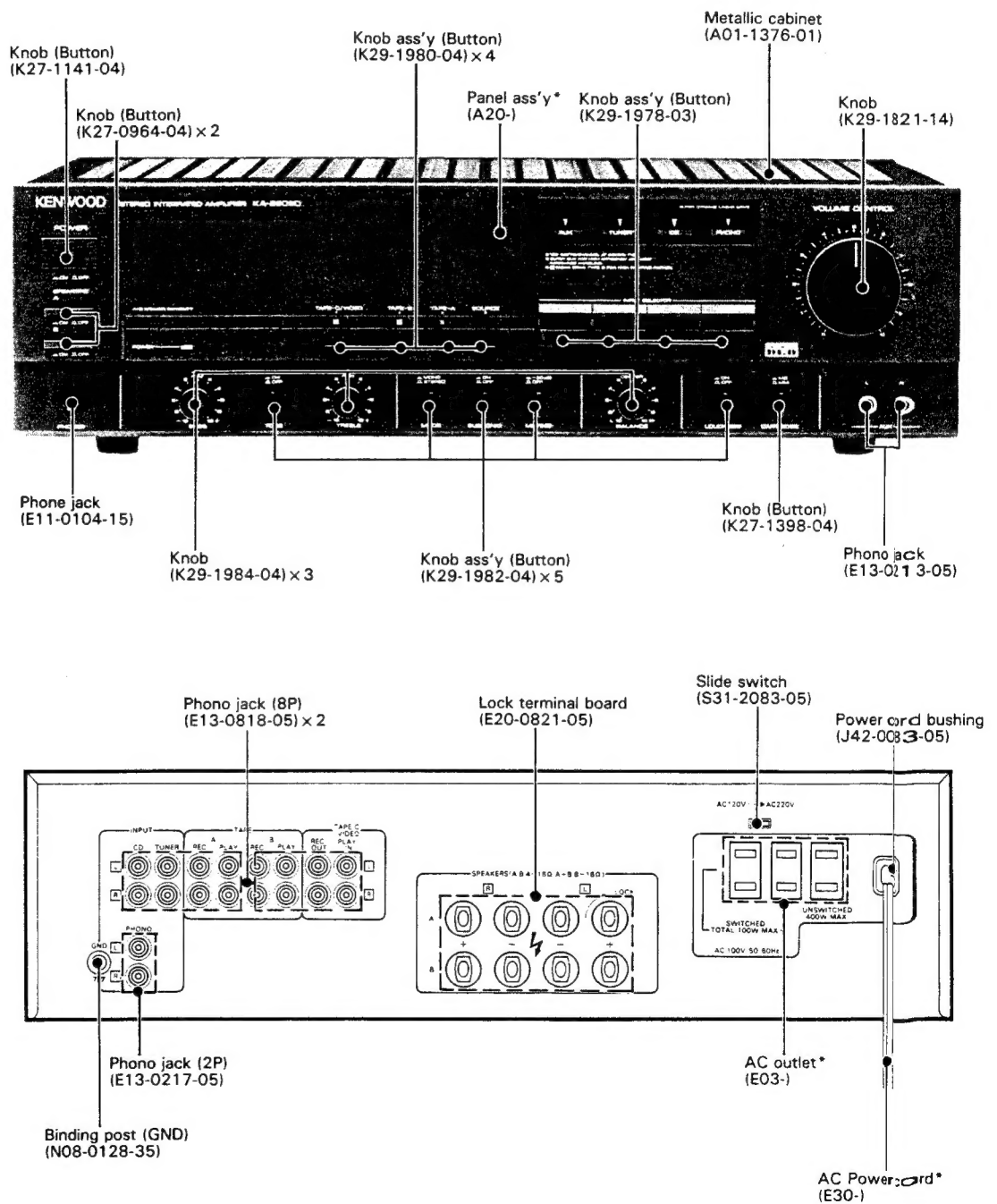


KENWOOD KA-880SD

STEREO INTEGRATED AMPLIFIER



DISASSEMBLY FOR REPAIR

REPLACEMENT OF PARTS ON AUDIO UNIT

1. Remove the metallic cabinet. Remove 1 screw in the middle of large capacitors and 1 screw at the right-forehand side (1).
2. Remove 2 screws at the chassis R (unified with the bottom plate) (2) and 2 screws at the rear panel (3).

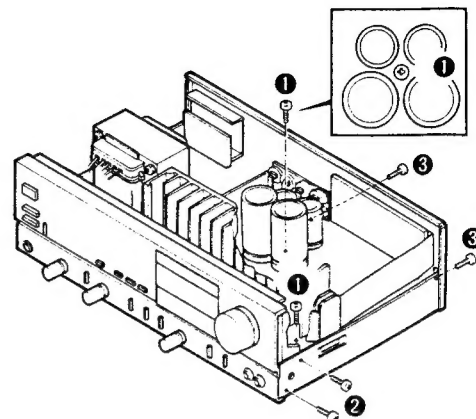


Fig. 1

3. Remove 4 screws at the bottom plate (4).
4. Slide and remove the bottom plate as shown by the arrow, being aware that parallel flat cable is sandwiched by pc boards (5).

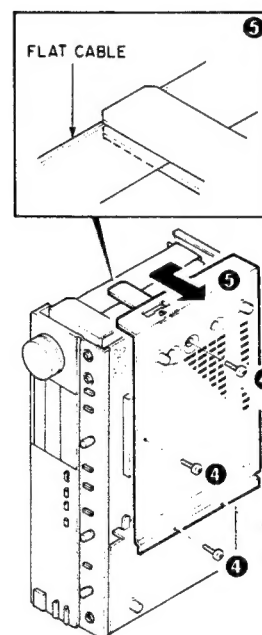


Fig. 2

REPLACEMENT OF PARTS ON MAIN AMP UNIT

5. Remove 4 screws at the sides of the chassis, 2 on each side, (6) and 2 screws at the bottom side of the panel ass'y (7).

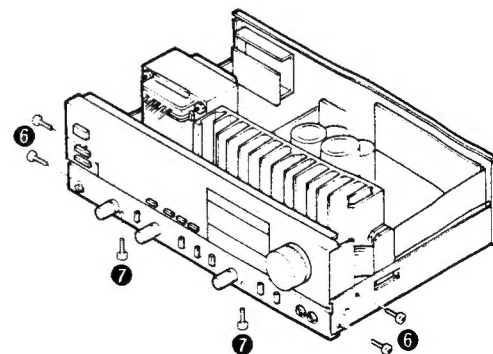


Fig. 3

DISASSEMBLY FOR REPAIR

6. Place a cloth, or something equivalent, to avoid damages to the top of the panel ass'y.
7. Disconnect parallel cords from their connectors and turn the panel ass'y over on the cloth (8).

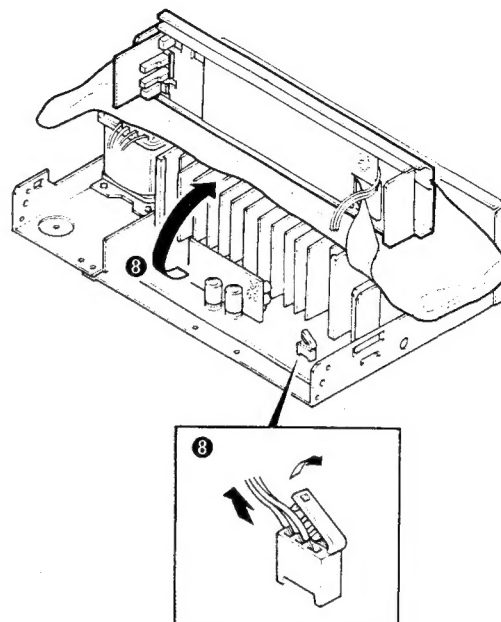


Fig. 4

REPLACEMENT OF FLAT CABLE

8. Pull both ends of the connector ends (9). Pull out the flat cable (10).
9. When plugging in the flat cable be sure the both ends are pulled up (11).
10. After the flat cable has been inserted, all the way, push the both ends of the connector (12). Make sure the flat cable is secured in the connector.

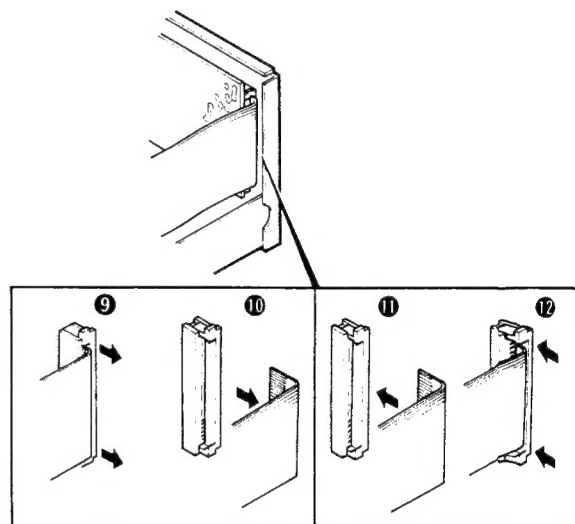


Fig. 5

REPLACEMENT OF PARTS ON CONTROL UNIT

11. Remove 2 screws retaining the escutcheon of the INPUT SELECTOR (18).
12. Pull the knobs off (14).

(Caution) Pull the knobs off at switch-off position. Pulling off at switch-on position will cause a lock malfunction. This switch is a short stroke type switch and for this reason, switch on-off position is not easily distinguished.

13. Remove 4 hexagonal nuts from the potentiometers (15).
14. Remove 2 screws retaining the selector switch (16).
15. Remove 2 push rivets retaining the pc board (17).

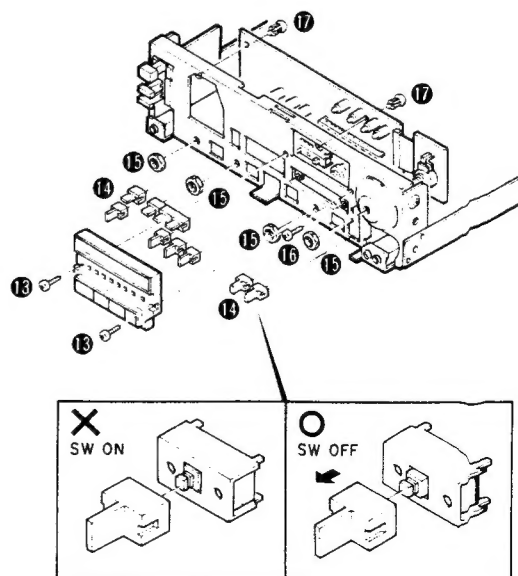
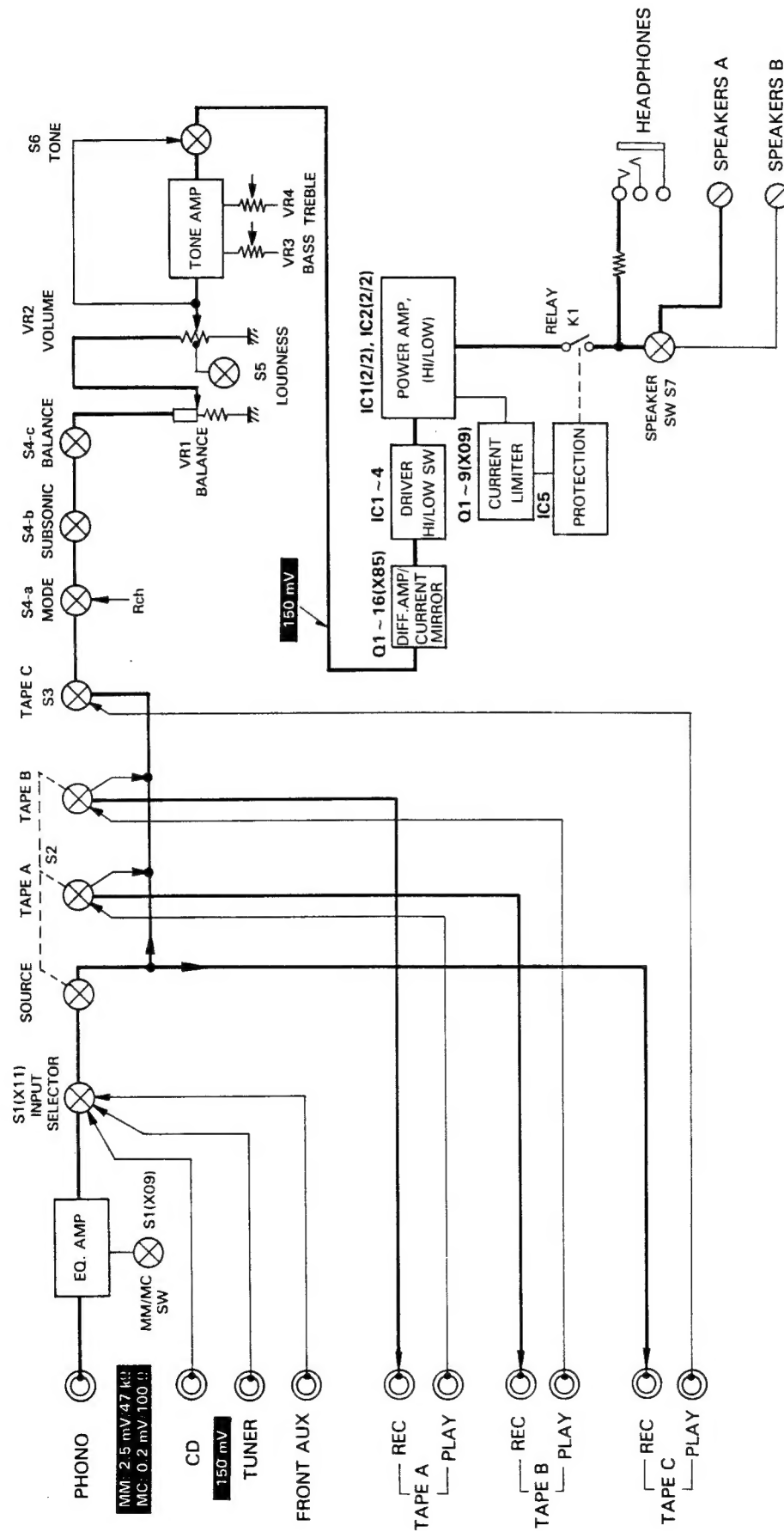


Fig. 6

BLOCK & LEVEL DIAGRAM



CIRCUIT DESCRIPTION

PRE-AMP UNIT (X85-1010-10)

Components	Functions	Operations
Q1 ~ Q8	EQ circuit first-stage differential amp	
IC1	EQ circuit op-amp IC	

CONTROL UNIT (X11-2080-10)

Component	Function	Operation
IC1	Tone circuit op-amp IC	

AUDIO UNIT (X09-2120-10)

Components	Functions	Operations
Q1 ~ Q9	Current limiter	Final protection circuit (Q7, Q8 for high voltage resistance) for over-load drive.
Q11, Q12	Current regulator circuit	Ripple elimination circuit inserted into the B line towards the A class stage.
Q13, Q14	Voltage regulator circuit	Voltage regulator circuit inserted into the B line towards the EQ circuit.
Q15, Q16	PHONO shock noise prevention circuit <div>Muting</div>	When the B voltage of the EQ circuit drops by switching power ON, and when the drop of the -B voltage is slower than that of +B, chemical capacitors C67 and C68, which are inserted in the EQ and NF circuits, are charged and the time between the power ON and the stabilization of output in terms of DC increases. This circuit prevents shock noise or relay which could occur when MM/MC is switched later.
Q17, Q18	Current regulator circuit	Current regulator circuit inserted in the EQ first stage, to improve the CMRR.
Q19, Q20	Multivibrator	After the power is switched ON until relay is activated, or when the protection circuit is operating due to circuit malfunction, this circuit functions to flash the LED indicating malfunction of the amp.
IC1, IC2	Power IC	
IC3, IC4	Switching IC	High/Low switching circuit for the DLD.
IC5	Protection IC	This circuit disconnects the relay when the amp is malfunctioning.

MAIN-AMP UNIT (X85-1020-10)

Components	Functions	Operations
Q1, Q2	A class 1st stage differential amp	
Q3 ~ Q6	A class 1st stage cascode circuit	
Q7 ~ Q10	2nd stage differential amp	
Q11 ~ Q14	3rd stage differential amp	
Q15, Q16	Current mirror circuit	

ADJUSTMENT/REGLAGE/ABGLEICH

ADJUSTMENT

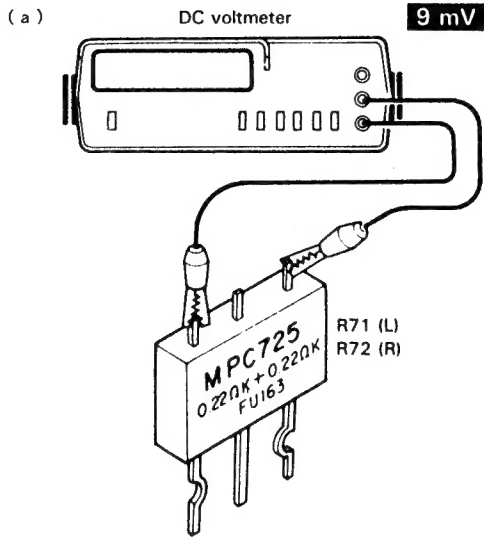
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Set the controls and switches as follows: POWER: ON SPEAKER: B REC OUT: OFF SELECTOR: PHONO							
1	IDLE CURRENT	—	Connect a DC voltmeter across CP1 (L) CP2 (R)	VOLUME: 0	VR1 (L) VR2 (R)	9mV	(a)

REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS L'ALIGNEMENT	ALIGNER POUR	FIG.
Régler les controles et les boutons comme suit: POWER: ON SPEAKER: B REC OUT: OFF SELECTEUR: PHONO							
1	COURANT DE POLARISATION	—	Connecter un voltmètre de CC sur CP1 (G) CP2 (D)	VOLUME: 0	VR1 (G) VR2 (D)	9mV	(a)

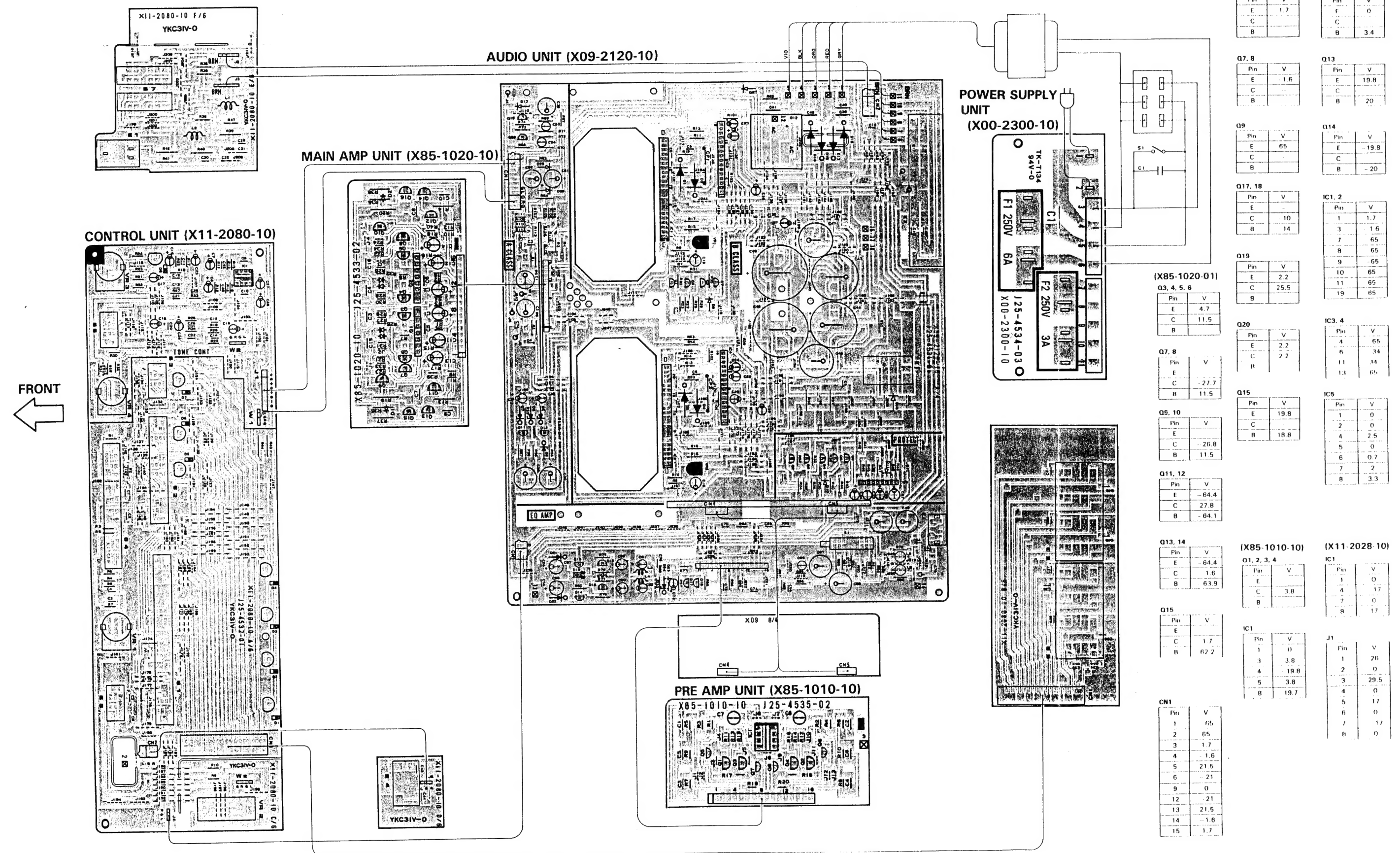
ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VORSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
Die Regler und Knöpfe wird folgt einstellen: POWER: ON SPEAKER: B REC OUT: OFF WÄHLER: PHONO							
1	LEERLAUFSTROM	—	Einen Gleichspannungsmesser über CP1 (L) CP2 (R) anschließen.	VOLUME: 0	VR1 (L) VR2 (R)	9mV	(a)



KA-880SD KA-880SD

PC BOARD



(X09-2120-10)

Pin	V
E	1.7
C	
B	

Pin	V
E	0
C	
B	3.4

Q7, 8

Pin	V
E	1.6
C	
B	

Q13

Pin	V
E	19.8
C	
B	20

Q9

Pin	V
E	65
C	
B	

Q14

Pin	V
E	19.8
C	
B	-20

Q17, 18

Pin	V
E	
C	10
B	14

IC1, 2

Pin	V
1	1.7
3	1.6
7	65
8	65
9	65
10	65
11	65
19	65

Q19

Pin	V
E	2.2
C	25.5
B	

IC3, 4

Pin	V
4	65
6	34
11	34
13	65

(X85-1020-01)

Pin	V
E	4.7
C	11.5
B	

Q20

Pin	V
E	2.2
C	2.2
B	

IC5

Pin	V
1	0
2	0
4	2.5
5	0
6	0.7
7	2
8	3.3

Q15

Pin	V
E	19.8
C	
B	18.8

Q5, 10

Pin	V
E	
C	26.8
B	11.5

Q11, 12

Pin	V
E	-64.4
C	27.8
B	-64.1

Q13, 14

Pin	V
E	-64.4
C	1.6
B	63.9

(X85-1010-10)

Pin	V
E	
C	3.8
B	

(X11-2028-10)

Pin	V
1	0
4	17
7	0
8	17

Q15

Pin	V
E	
C	1.7
B	62.2

IC1

Pin	V
1	0
3	3.8
4	19.8
5	3.8
8	19.7

J1

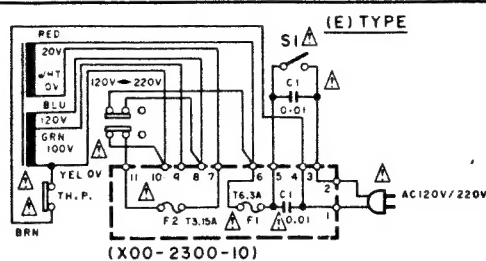
Pin	V
1	26
2	0
3	29.5
4	0
5	17
6	0
7	17
8	0

CN1

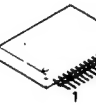
Pin	V
1	65
2	65
3	1.7
4	1.6
5	21.5
6	21
9	0
12	21
13	21.5
14	1.6
15	1.7

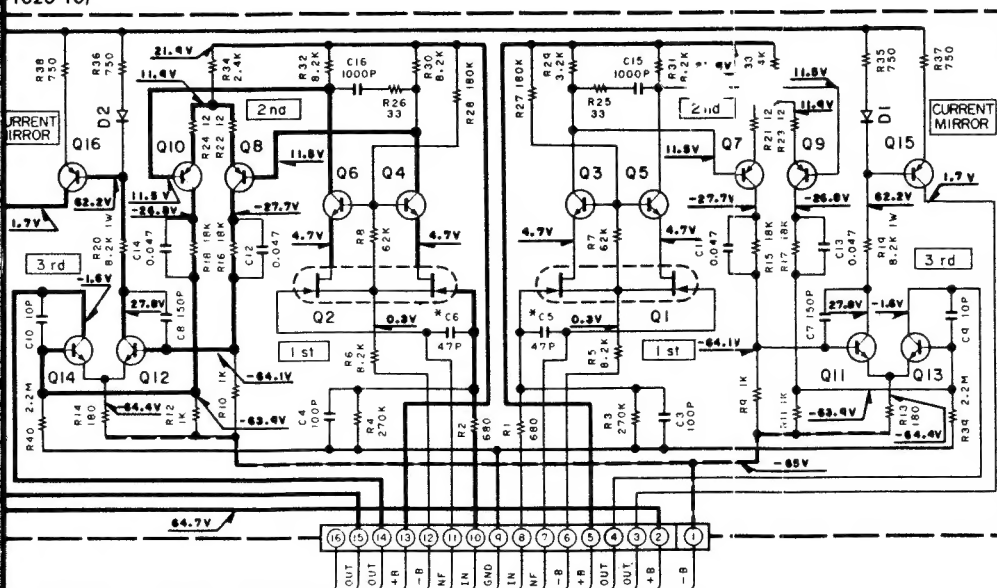
Refer to the schematic diagram for the values of resistors and capacitors. The PC board drawing is viewing from the side easy to check.

2
3
4
5
6
7
8
9
1
1



- TA2030





(X09-2120-10) (A/4)

(X85-1020-10)

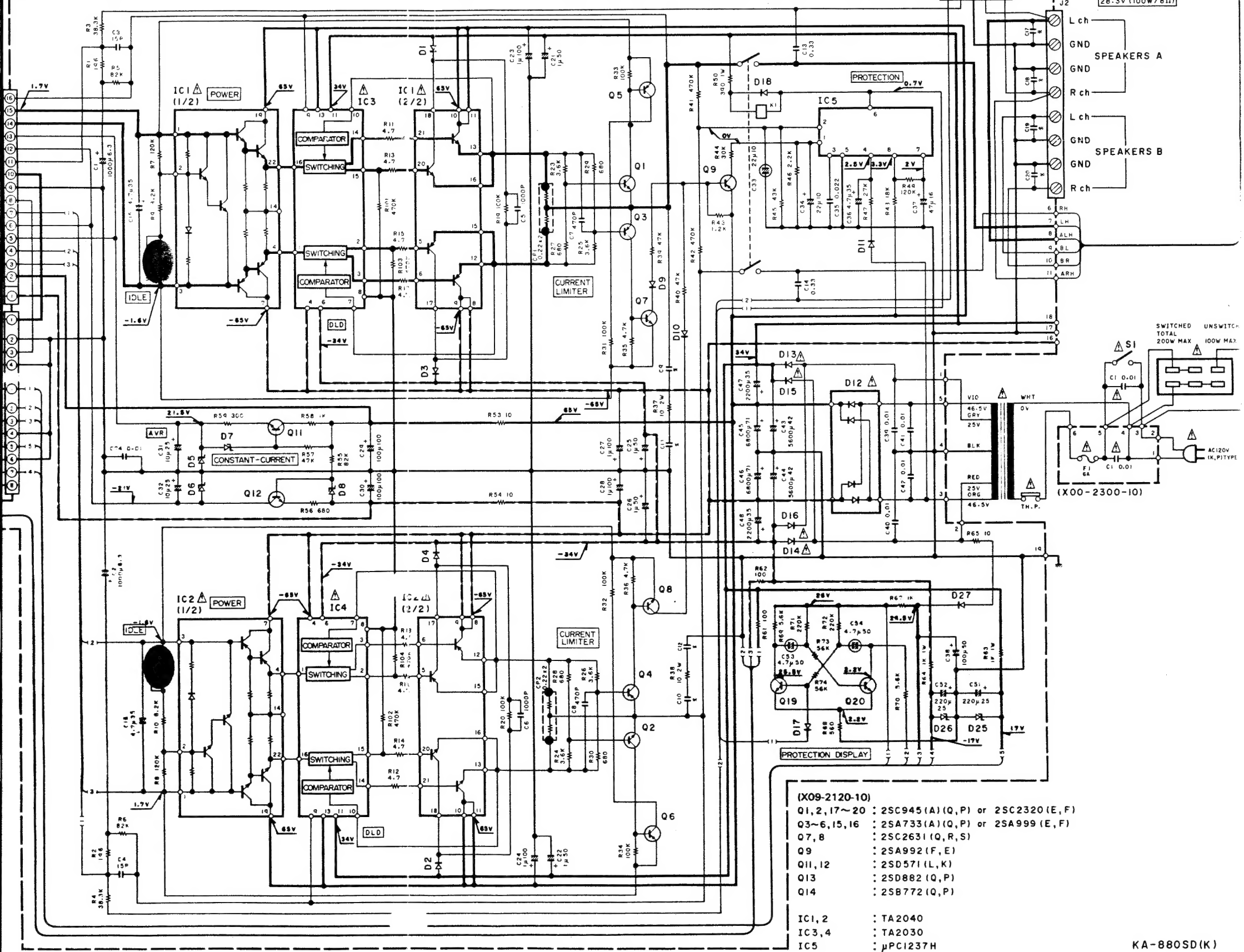
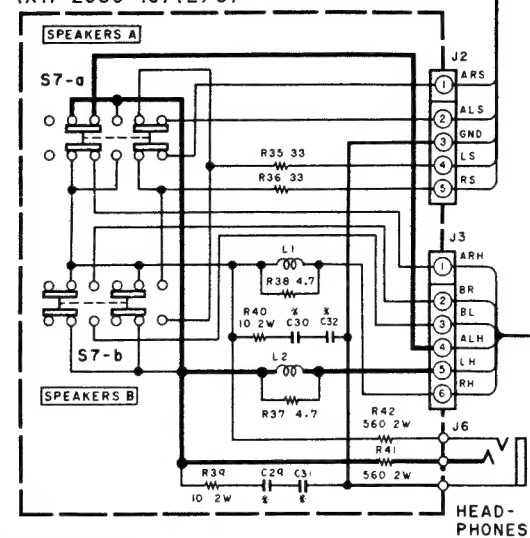
Q1, 2 : μ PA68H (K, L)
 Q3~6 : 2SC945 (A) (Q, P) or 2SC2320 (E, F)
 Q7~10 : 2SA733 (A) (Q, P) or 2SA999 (E, F)
 Q11~14 : 2SC2632 (Q, R, S)
 Q15, 16 : 2SA1124 (Q, R, S)

D1, 2 : ISS176 or ISS133

(X09-2120-10)

D1~4 : RU4Z
 D5, 6 : RD22J (B2)
 D7, 8, 24 : RD5.6J (B2)
 D9~11, 17, 18 : IS2076A
 D12 : D5FB20
 D13~16 : S3V20
 D19, 20 : RD20J (B3)
 D21, 22 : E-272
 D23 : IS1555 or IS2076
 D25, 26 : RD16E (B2)
 D27 : DSM1A1

(X11-2080-10) (E/6)



(X09-2120-10)

Q1, 2, 17~20 : 2SC945 (A) (Q, P) or 2SC2320 (E, F)
 Q3~6, 15, 16 : 2SA733 (A) (Q, P) or 2SA999 (E, F)
 Q7, 8 : 2SC2631 (Q, R, S)
 Q9 : 2SA992 (F, E)
 Q11, 12 : 2SD571 (L, K)
 Q13 : 2SD882 (Q, P)
 Q14 : 2SB772 (Q, P)

IC1, 2 : TA2040
 IC3, 4 : TA2030
 IC5 : μ PC1237H

(X00-2300-10)

SWITCHED TOTAL 200W MAX 100W MAX

KA-880SD (K)

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

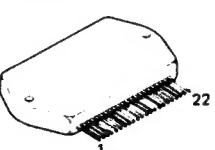
DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanden die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

KA-880SD

KENWOOD



PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C57 ,58 C59 ,60 C61 ,62 C63 ,64 C65 ,66			CE04FW1E101MEL CE04FW1E470MEL CE04FW1H010MEL CC45FSL1H221J CC45FSL1H101J	ELECTR0 100UF 25WV ELECTR0 47UF 25WV ELECTR0 1.0UF 50WV CERAMIC 220PF J CERAMIC 100PF J	XTE	
C67 ,68 C69 ,70 C69 ,70 C69 ,70 C71 ,72			CE04FW0J222MEL CK45FB1H102K CK45FB1H102K CK45FB1H681K CK45FB1H222K	ELECTR0 2200UF 6.3WV CERAMIC 1000PF K CERAMIC 1000PF K CERAMIC 680PF K CERAMIC 2200PF K	KPUM UE XTE XTE	
C73 C74 C75 C75 C75 -77			CE04FW1A101MEL CK45FF1H103Z CK45FB1H102K CK45FB1H102K CK45FB1H102K	ELECTR0 100UF 10WV CERAMIC 0.010UF Z CERAMIC 1000PF K CERAMIC 1000PF K CERAMIC 1000PF K	KPUM UE XTE	
C78			CE04FW1HR22MEL	ELECTR0 0.22UF 50WV		
48 51 52	1C 1C 1B		E13-0217-05 E20-0821-05 E23-0125-05	PHONE JACK (2P)PHONE L/R LOCK TERMINAL BRD(8P)SPEAKERS TERMINAL (GND)		
-			J61-0307-05	WIRE BAND		
L3 ,4 L5 ,6		*	L40-1011-14 L40-1011-47	SMALL FIXED INDUCTOR(100UH,K) SMALL FIXED INDUCTOR(100UH,K)	XTE	
M	1B		N09-1236-05	TAPPING SCREW (Ø3X16)		
CP1 ,2 R11 -18 R27 -30 R37 ,38 R50			R90-0187-05 RD14AB2E4R7JTS RD14AB2E681JTS RS14DB3D100JTE RS14DB3A391JTE	MULTI-COMP 0.22X2 K 5W FL-PROOF RD 4.7 J 1/4W FL-PROOF RD 680 J 1/4W FL-PROOF RS 10 J 2W FL-PROOF RS 390 J 1W		
R53 ,54 R56 R58 R59 R60		*	RD14AB2E100JTS RD14AB2E681JTS RD14AB2E102JTS RD14AB2E301JTS RD14AB2E4R7JTS	FL-PROOF RD 10 J 1/4W FL-PROOF RD 680 J 1/4W FL-PROOF RD 1.0K J 1/4W FL-PROOF RD 300 J 1/4W FL-PROOF RD 4.7 J 1/4W		
R61 ,62 R63 ,64 R65 R67 VR1 ,2		*	RD14AB2E101JTS RS14DB3A102JTE RD14AB2E100JTS RD14AB2E102JTS R12-4306-05	FL-PROOF RD 100 J 1/4W FL-PROOF RS 1.0K J 1W FL-PROOF RD 10 J 1/4W FL-PROOF RD 1.0K J 1/4W TRIMMING PBT. (50K)IDLING		
K1 S1	2C 1C		S51-2045-05 S40-6027-05	MAGNETIC RELAY PUSH SWITCH (CARTRIDGE)		
D1 -4 D5 ,6 D7 ,8 D9 -11 D12			RU4Z RD22JS(B2) RD5.6JS(B2) 1S2076A DSFB20	DIODE ZENER DIODE ZENER DIODE DIODE DIODE		
D13 -16 D17 ,18 D19 ,20 D21 ,22 D23		*	S3V20 1S2076A RD20JS(B3) E-272 1S1555 1S2076	DIODE DIODE ZENER DIODE CONSTANT CURRENT DIODE DIODE DIODE		

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

S: South Africa

T: England

U: PX(Far East, Hawaii)

UE: AAFES(Europe)

X: Australia

IM: Other Areas

⚠ indicates safety critical components.

PARTS LIST

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[illegible]

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

S: South Africa

T: England

U: PX(Far East, Hawaii)

UE . AAFES(Europe)

X: Australia

M: Other Areas

 indicates safety critical components.

KENWOOD

SPECIFICATION

EIA

Power Amplifier Section

Power Output

100 watts* per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.005% total harmonic distortion

Both Channels Driven into

8 ohms at 1 kHz.....105 W + 105 W (Except USA, Europe, U.K. and Canada)

4 ohms at 1 kHz.....140 W + 140 W (Except USA, Europe, U.K. and Canada)

Dynamic Power Output.....210 watts at 4 ohms (Except USA, Europe, Australia, U.K. and Canada)

Total Harmonic Distortion

(AUX—SPKR 8 Ω)

at Rated Output,
20 Hz ~ 20,000 Hz.....0.005%

at 1/2 Rated Output,
20 Hz ~ 20,000 Hz.....0.004%

at Rated Output, 1,000 Hz.....0.003%

(PHONO—SPKR 8 Ω : at -20 dB VOLUME Level)

at Rated Output,
20 Hz ~ 20,000 Hz.....0.005%

Intermodulation Distortion

(60 Hz:7 kHz = 4:1).....0.005% at rated power into 8 ohms

Damping Factor.....1,000, at 50 Hz into 8 ohms

Transient Response

Rise Time.....1.7 μ s

Frequency Response.....1 Hz to 150 kHz,
+0 dB, -3 dB

Speaker Impedance.....Accept 4 ohms to 16 ohms

Input Sensitivity/Impedance

Phono MM.....2.5 mV/47 k ohms

Phono MC.....0.2 mV/100 ohms

TUNER, AUX., TAPE PLAY,

TAPE C/VIDEO.....150 mV/47 k ohms

Signal-to-Noise Ratio (IHF-A)

Phono MM.....86 dB for 2.5 mV input

Phono MC.....70 dB for 250 μ V input

TUNER, AUX., TAPE PLAY.....107 dB

Maximum Input Level for Phono

MM.....200 mV (RMS), T.H.D. 0.005%
at 1 kHz

MC.....15 mV (RMS), T.H.D. 0.005%
at 1 kHz

Output Level/Impedance

TAPE REC (P_{in}), TAPE C/VIDEO.....150 mV/220 ohms

Frequency Response for Phono.....RIAA standard curve \pm 0.3 dB
(20 Hz to 20,000 Hz)

Tone Control

Bass..... \pm 10 dB at 100 Hz

Treble..... \pm 10 dB at 10 kHz

Loudness Control

(at -30 dB VOLUME Level).....+9 dB at 100 Hz

Subsonic Filter.....18 Hz, 6 dB/oct.

General

Power Consumption.....3.3 A (USA and Canada : UL and CSA)

220 W (Others)

AC Outlets.....Switched 2, Unswitched 1

(Except U.K., European, Australian countries)

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.